



The **NEW TRAIL**

To Keep Pace with America

*The 1966
Moonshooter
report*

NEW FILMS

ADVENTURES OF AN *
10 min. color - rental \$2.50

THE HOLE
15 min. color - rental \$3.85

STYLES OF LEADERSHIP
25 min. black & white - rental \$3.50

OF TIME, WORK, AND LEISURE
28 min. black & white - rental \$4.00

THE CHILD OF THE FUTURE:
How He Will Learn.
58 min. black & white - rental \$2.60

The life of an average human being as symbolized by the figure *. As * grows his ability to see and enjoy life is reduced by the dull routine frustrations of everyday living. When he becomes an adult he is unable to react freely to the world about him. He neither sees nor finds pleasure in new things until, through his own child, he reawakens to see the world anew.

An animated fantasy about moles, missiles, and mankind. The possibility of a final, fatal nuclear explosion is compellingly evoked in this vital but witty film. Two construction workers, in a hole, argue about accidents of different kinds. When there is an accident on the job the two men first interpret the sound as a bomb explosion.

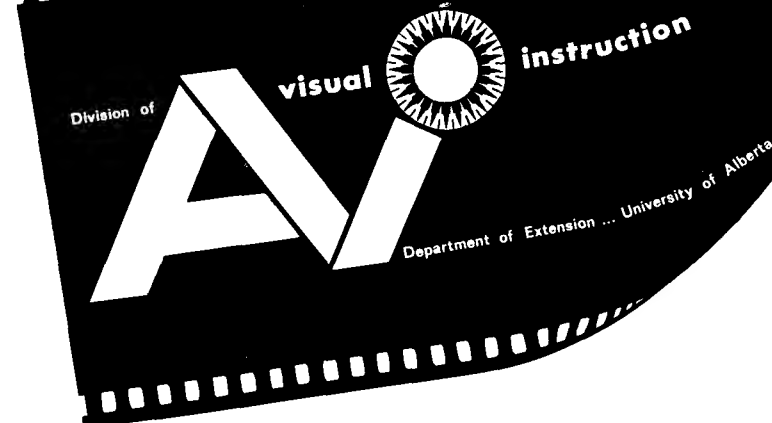
Presents a common business problem handled by four different types of leaders. The first executive tells his men exactly what to do and how to do it, the second leader sells the group on doing a good job, the third consults with his men to get their recommendations, while the fourth leader permits his men to join him in making the decision.

A documentary presentation of the concepts set forth in Sebastian de Grazia's provocative study by the same name. In our work-oriented, clock-dominated society we have won "time-off" but we have lost the ability to appreciate true leisure.
.....National Educational Television.

The film examines some of the ways in which technology is being used in the classroom. Shows how schools and colleges are shedding their traditional apathy to machines and are now exploiting all manner of mechanical and electronic aids. The film provides the opportunity to observe the child's actual encounter with these new devices and to draw conditions as to their effect on the process

.. Dr. Marshall McLuhan
is host and narrator
of program.

FOR BOOKING
INFORMATION
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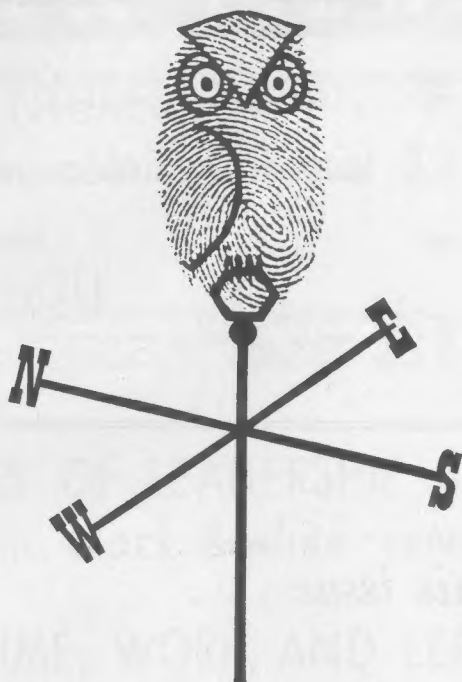
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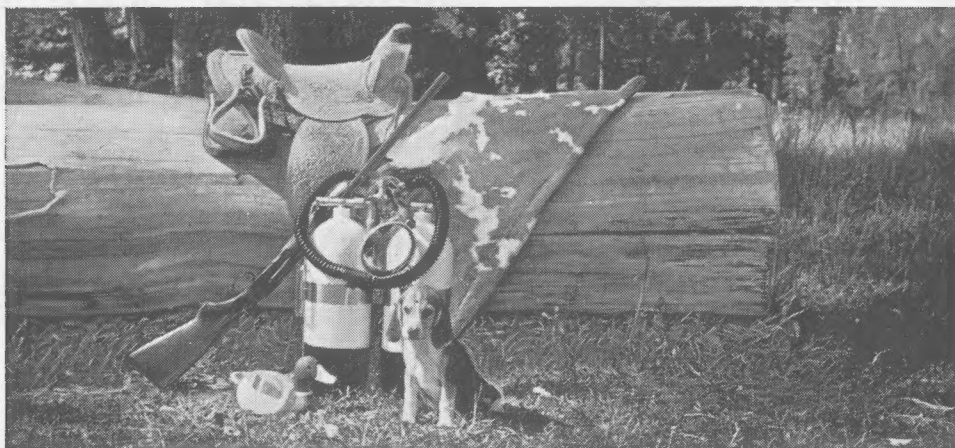
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CANADIAN IMPERIAL BANK OF COMMERCE



The Faculty of Medicine has announced a new scholarship program established and financed by the New York Life Insurance Company.

Dean Walter C. MacKenzie says the faculty is one of 11 medical colleges in the United States and Canada to be invited to participate in the program.

Starting this Fall, the program will provide one scholarship for a member of each new medical class who would otherwise have serious financial problems in entering a career in medicine. An unusual aspect of the scholarship program is that the amount of each grant will depend on a budget worked out by Dean MacKenzie with the scholarship recipient. Each scholarship is intended to cover tuition, room, board, fees, books and equipment.

According to the terms established by the New York Life, the Faculty of Medicine will be solely responsible for the selection of scholarship recipients. All students applying for admission to the Faculty will be eligible to compete for this award, which will be awarded on the basis of scholarship and financial need.

The Faculty of Medicine presently is able to accept 105 students each year. Seen accepting the initial scholarship cheque from S. Ross Johnson, New York Life supervisor, is Dr. D. F. Cameron, right, Associate Dean of Medicine.

A Major Weapon

A TEAM of Canadian Department of Agriculture scientists has discovered and developed a new broad-spectrum antibiotic which promises to be a major weapon against disease.

The new antibiotic, called Myxin, is the result of several year's work done in the CDA's Research Branch by Dr. F. D. Cook, Associate Professor of Soil Microbiology at The University of Alberta, Dr. E. A. Peterson, a University of Alberta graduate in 1950 and 1952, and Dr. D. C. Gillespie.

Myxin has been tested in the laboratory with success against 34 species of bacteria, 49 species of fungi, 12 species of antinomycetes, and 12 species of yeast.

In the test tube, it was effective against the organism responsible for tuberculosis and against the infectious bacterium, *Staphylococcus aureus*, which is troublesome in hospitals and currently resistant to other antibiotics. It is also extremely effective in lab tests against many species of plant pathogenic bacteria which cause such diseases as ring rot of potatoes, alfalfa wilt, fireblight of fruit trees, and fungi which cause such diseases as cereal root rot.

The organism which produces Myxin is a member of a group of soil bacteria known as myxobacters. The one-celled microbe was found by Dr. Cook when he was doing basic research on the relationship between soil bacteria, soil fertility, and the health of plants. Dr. Cook found that these myxobacters prevented growth of many other organisms that were causing serious crop diseases. This growth prevention was the result of the production by the myxobacters of lytic enzymes that dissolved other bacteria. Later he saw that one strain of myxobacter produced no lytic enzymes but rather a red colored material which prevented the growth of bacteria.

Dr. Gillespie successfully extracted this colored material from broth in which myxobacters had grown. Tests by Dr. Cook and Dr. Peterson showed that this extract had the same killing effect that had been demonstrated by the living culture.

Dr. Gillespie developed methods of production, isolation, and purification of the antibiotic and succeeded in crystallizing it. This made it possible to carry out more extensive tests.



RESEARCHERS PETERSON, COOK, GILLESPIE, HOCHSTER



During the course of the twenty-seventh Annual Meeting of the General Alumni Association held on the Edmonton campus early in the Spring, delegates assembled for a photograph on the steps of the New Women's residence prior to lunch. At the day-long meeting a substantial commitment of \$8,000 for library books was made to the Edmonton and Calgary campuses.

Official delegates included, front row, left to right: Mrs. Lora Mellemstrand, Calgary; Dr. Walter H. Johns, President of the University; Mrs. Mae Myhre, Victoria; Dr. Jack Bradley, President of the G.A.A.; Mrs. Jean Duff, Toronto; Dr. Donald R. Stanley, Edmonton; Miss Billie Niblock, Edmonton; Mrs. Doris Jewell, Red Deer; Dr. Doug Ritchie, Edmonton; second row: Judge Bruce C. Whittaker, Edmonton; Mr. George Ross, Edmonton; Mr. Allan McQuarrie, Calgary; Cambie Gillespie, Calgary; back row: Dr. Art Anderson, Edmonton; Mr. Alex Cairns, Edmonton; Mr. Frank McEvoy, Vancouver; Mr. Al Armstrong, Red Deer; Mr. John Armstrong, Calgary; Mr. Doug Burns, Edmonton; Dr. Bob Turner, Edmonton; Mr. Alex Markle, Executive Secretary of the G.A.A.

MODERN AGRICULTURE ON FILM

A new 30-minute 16 mm. color film with sound, portraying in dynamic fashion the role of modern agriculture in the Canadian economy and revealing the excellent opportunities available for graduates in agriculture, has just been received at the University. The film, sponsored by the Wawanesa Mutual Insurance Co., is available on loan from the Faculty of Agriculture to schools, 4-H groups, and to any other groups interested in better understanding opportunities for those with higher education in agriculture, as well as for those wishing to better understand Canada's modern agriculture.

Unique is the presentation on screen of seven men prominent in the fields of Canadian business, education, and journalism, combining their thoughts to explain the relationship between agriculture and business, while emphasizing the importance of education.

OLD TRAILS—1946

The first post-war Rhodes Scholar from the University will be John A. Dougan who left his studies in honours history in 1942 to take the King's shilling. During the war he rose from private to major in the Loyal Edmonton Regiment, and won a military cross and bar. The second Rhodes Scholar will be V. E. Graham who foresook his studies some years ago for naval intelligence. The I.O.D.E. Scholarship of 1945-46 has been granted to J. E. Gander, '45, who serves this year as an instructor in English at the University.

Miss Maimie S. Simpson, who was giving half-time service to the University and half-time to the Edmonton Public School Board, was appointed by the Board of Governors to become a full time member of the University staff. Dr. C. F. Bentley, then on the staff of the University of Saskatchewan, had been appointed assistant professor of soils. Mr. J. R. Murray and Mr. B. E. Riedel, both of whom expect shortly to be discharged from the Armed Forces, had been appointed sessional instructors in pharmacy.

TOUR BUREAU ON CAMPUS

There is a new Students' Union project at the University known as The Students' Union tour bureau. The purpose of the agency is to provide facilities to conduct organized private tours of the campus, and the service is available to any groups wishing to arrange a visit to the University.

The Golden Key Society, under its president, G. Burn Evans, is in charge and members act as hosts and hostesses to visiting groups. The bureau will provide all types of guided tours to allow groups to see and understand those parts of the campus they are interested in. In this way the public will be able to visit the campus on an organized basis on their own time.

Schools and other groups of persons wishing to tour the University should contact Mr. Evans directly regarding tour details.

Keeping Pace at the U. of A.

By BRIAN A. McDONALD
Assistant to the President

In the article "To Keep Pace with America", found elsewhere in this publication, the tremendous changes which have taken place in higher education over the past fifteen years are discussed. Many of the changes cited are of the intangible nature—change in the personalities of the students, their goals, their outlook, their needs; change in the roles played by the faculty; and change in the amount of knowledge available to be studied.

Although the article is mostly concerned with the situation in the United States, there is no doubt but what much of what is said applies to Canada and, even more specifically, to The University of Alberta. Accordingly, the editor of *The New Trail* thought that it might prove interesting to the alumni of The University if they were given some idea of the changes that have taken place at the University since 1950-51.

The first change that comes to mind, of course, is the change in the University's appearance. Whereas in 1950-51 the campus was a relatively small collection of buildings on a relatively wide-open piece of land, today it is a rather large collection of buildings on a piece of land that almost everyone regards as being much too small. In fact, and as most of you undoubtedly know, the University will soon acquire the entire North Garneau area for its expansion requirements. Among the buildings added to the campus since 1950-51 are the Agriculture Building, the Engineering Building, the Physical Education complex, the Mathematics - Physics - Chemistry complex, the Cameron Library, the Education Building, the Lister Hall Residence complex, the Household Economics Building, and the soon-to-

be completed Henry Marshall Tory (Social Sciences) Building. During this period the University's assets have risen from \$15,000,000 to \$125,000,000. And to place the changes in even sharper perspective, the University's capital budget for the 1966-67 fiscal year is some \$28,000,000—almost double the value of the whole campus in 1951.

If an alumnus were to return to the campus after an absence of fifteen years he would undoubtedly first notice the change in the University's physical appearance. (He might first notice the difficulty in finding a place to park his car—there were over 5,200 student-registered cars in 1965-66). However, soon thereafter, he would realize that the number of **people** on campus—students, professors, secretaries, workmen—had increased greatly. Whereas in 1950-51 there were 3,200 full-time students, 237 full-time faculty, and about 450 other full-time employees, in 1965-66 the University had 10,274 full-time students, 736 full-time faculty, and about 1,750 other full-time employees. In other words, the number of bodies either studying or working on campus has more than tripled in the past fifteen years. The enrolment has been increasing, and is expected to continue to increase, at the rate of about 1,000 students per year with the faculty increasing by about 100 per year. However, indications are that the University will "level-off" at an enrolment of 18,000 full-time students and present planning is predicted on this maximum.

Concurrent with the change in **numbers** of students has been a change in the **make-up** of the student body: (1) Perhaps the most obvious change is the increase in the

number of women students—as a proportion of the total student body; whereas in 1950-51 women represented 26 per cent of the student body, today they represent over 35 per cent—and it is predicted that this trend will continue. (2) The second change in the student body is in the percentage working on post-graduate degrees; in 1950-51 graduate students were 7 per cent of the total while today they represent about 11 per cent. It is predicted that, by 1980, the percentage may well have risen to over 20 per cent. (3) Partly as a result of the trend toward greater emphasis on graduate studies and partly because of the high reputation of the University, there has been a substantial increase in the number of foreign students enrolled at the University. Whereas in 1950-51 there were only about 25 foreign students (less than 1 per cent of the total), in 1965-66 there were over 900 such students (almost 9 per cent of total). The presence of such a large number of students from foreign lands has added a pleasant touch of sophistication and a cosmopolitan atmosphere to the campus. (4) The student body is, by and large, older now than it was in the early 1950's. Several factors have caused this phenomenon: the trend towards more graduate study, the extension of several programs from three years to four years, the establishment of junior colleges with the result that many freshmen students take their first year of University work at the junior colleges, etc. As a result, the average student on campus today is more mature than the average student (excluding the veterans) of fifteen years ago.

(Continued on Page 8)

Several other comparisons between 1950-51 and 1965-66 will serve to indicate the degree of change over the fifteen year period and they should be of interest to alumni. Perhaps the easiest way of illustrating these somewhat unrelated criteria is by means of a table.

	1950-51	1965-66
Number of courses offered	600	1,225
Number of Faculties and Schools	12	15
Number of Academic Departments	38	58
Operating Costs	\$2,150,000	\$21,800,000
—per full-time student	\$672	\$2,122
Library Volumes	120,000	550,000
Residence accommodation	550 (beds)	1,511 (beds)

* * * * *

The brief analysis above, cannot begin to cover all of the changes which have taken place at The University of Alberta in the past fifteen years. However, it should give concrete evidence that change—both tangible and intangible—has taken place. There is no doubt but what, during this period, the University has changed from an undergraduate teaching-oriented University to a University that places great emphasis on graduate education and research.

OLD TRAILS—1946

Cement has been poured for the foundations of the basements of both extensions for the Medical Building. Every floor of the Arts Building had undergone changes, some of them very extensive, and the same statement could be made of most of the buildings on the campus. The routine duties of the Registrar's Office had become so heavy as to leave little time for reorganization. The acting registrar 'Geoff' therefore called upon Dr. Max Wyman of the Department of Mathematics for help. To the problem in human engineering, Dr. Wyman had devoted intelligence and clear thinking with results that were happy indeed. The new "patterns" in Arts facilitated the new "block" system of registration that he devised, so that it was possible to register freshmen in large groups with astonishing speed.

OLD TRAILS—1956

The promotion of A. D. Cairns, assistant registrar, at the University since 1946, to registrar, was one of several promotions and appointments announced by President Andrew Stewart. Mr. Cairns succeeded G. B. Taylor, who continued on the staff as admissions registrar.

Another notable appointment was that of Bruce Peel, acting University librarian for the past year, to the post of chief librarian.

Still on the subject of libraries, Miss Mary Dodds was named acting extension librarian, succeeding Miss Flora Macleod who had left for Calgary.

In 1956 there was a good deal of concern about a proposed new Physical Education building on the campus. At its annual meeting, the Alumni Association resolved:

(i) That the Alumni Council of the General Alumni Association of the Uni-

versity of Alberta is wholeheartedly in favour of the idea of erecting a Jubilee Gymnasium and swimming pool on the campus to commemorate the occasion of the University's Golden Jubilee.

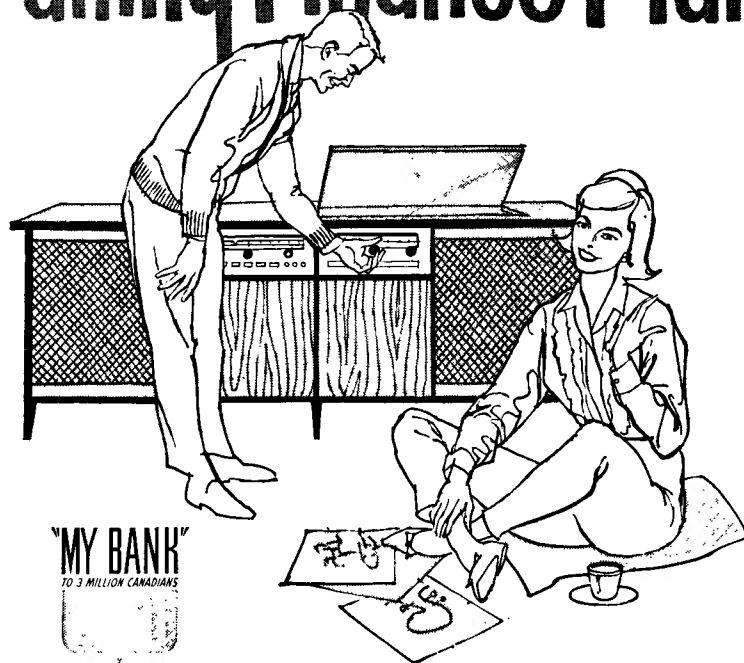
(ii) That if the University of Alberta and the Government of Alberta agreed to erect a Jubilee Gymnasium and Pool to commemorate the fiftieth anniversary of the University, the General Alumni Association pledges itself to launch an immediate campaign to raise funds from alumni to assist in the erection of such facilities.

Some 1,950 students, an increase of 150 over the previous year, had completed advance registrations for the thirty-eighth annual University summer session. A total of 98 courses were being offered, and 112 instructors had been appointed including 71 members of the University's regular teaching staff. Almost 100 students were registered in the school of graduate studies.

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*No memory of Alma Mater
older than a year or so
is likely to bear much resemblance
to today's college or university.
Which, in our fast-moving society,
is precisely as it should be,
if higher education is . . .*

To Keep Pace with America

W

HAT ON EARTH is going on, there?

Across the land, alumni and alumnae are asking that question about their alma maters. Most of America's colleges and universities are changing rapidly, and some of them drastically. Alumni and alumnae, taught for years to be loyal to good OLD Siwash and to be sentimental about its history and traditions, are puzzled or outraged.

And they are not the only ones making anguished responses to the new developments on the nation's campuses.

From a student in Texas: "The professors care less and less about teaching. They don't grade our papers or exams any more, and they turn over the discussion sections of their classes to graduate students. Why can't we have mind-to-mind combat?"

From a university administrator in Michigan: "The faculty and students treat this place more like a bus terminal every year. They come and go as they never did before."

From a professor at a college in Pennsylvania: "The present crop of students? They're the brightest ever. They're also the most arrogant, cynical, disrespectful, ungrateful, and intense group I've taught in 30 years."

From a student in Ohio: "The whole bit on this campus now is about 'the needs of society,' 'the needs of the international situation,' 'the needs of the IBM system.' What about *my* needs?"

From the dean of a college in Massachusetts: "Everything historic and sacred, everything built by 2,000 years of civilization, suddenly seems old hat. Wisdom now consists in being up-to-the-minute."

From a professor in New Jersey: "So help me, I only have time to read about 10 books a year, now. I'm always behind."

From a professor at a college for women in Virginia: "What's happening to good manners? And good taste? And decent dress? Are we entering a new age of the slob?"

From a trustee of a university in Rhode Island: "They all want us to care for and support our institution, when they themselves don't give a hoot."

From an alumna of a college in California: "No one seems to have time for friendship, good humor, and fun, now. The students don't even sing, any more. Why, most of them don't know the college songs."

What *is* happening at America's colleges and universities to cause such comments?

Today's colleges and universities:

IT BEGAN around 1950—silently, unnoticed. The signs were little ones, seemingly unconnected. Suddenly the number of books published began to soar. That year Congress established a National Science Foundation to promote scientific progress through education and basic research. College enrollments, swollen by returned war veterans with G.I. Bill benefits, refused to return to “normal”; instead, they began to rise sharply. Industry began to expand its research facilities significantly, raiding the colleges and graduate schools for brainy talent. Faculty salaries, at their lowest since the 1930's in terms of real income, began to inch up at the leading colleges. China, the most populous nation in the world, fell to the Communists, only a short time after several Eastern European nations were seized by Communist coups d'état; and, aided by support from several philanthropic foundations, there was a rush to study Communism, military problems and weapons, the Orient, and underdeveloped countries.

Now, 15 years later, we have begun to comprehend what started then. The United States, locked in a Cold War that may drag on for half a century, has entered a new era of rapid and unrelenting change. The nation continues to enjoy many of the benefits of peace, but it is forced to adopt much of the urgency and pressure of wartime. To meet the bold challenges from outside, Americans have had to transform many of their nation's habits and institutions.

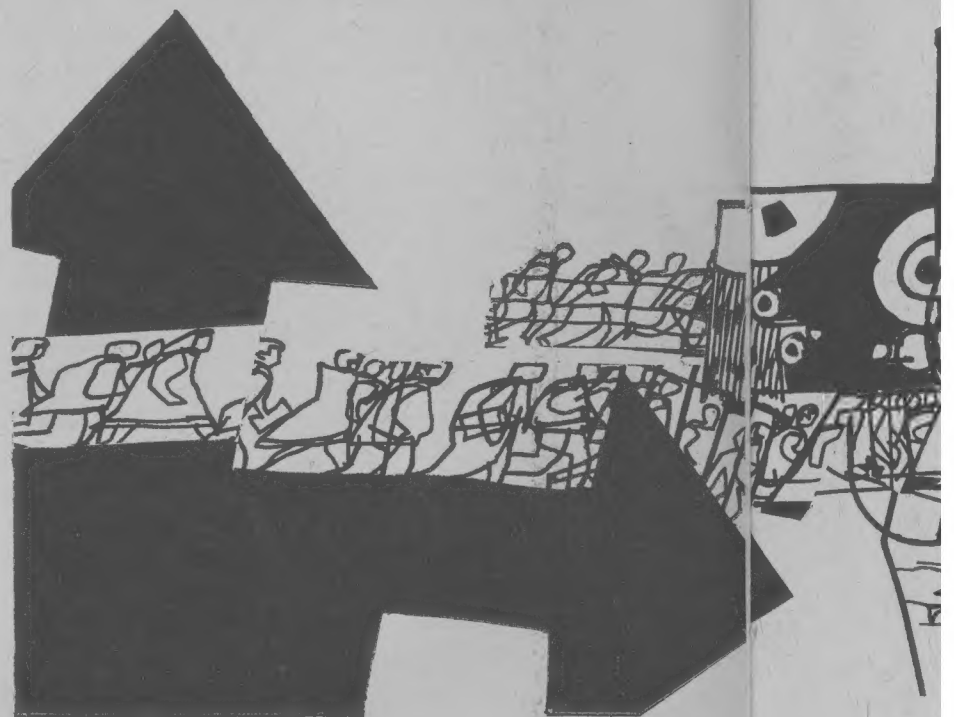
The biggest change has been in the rate of change itself.

Life has always changed. But never in the history of the world has it changed with such rapidity as it does now. Scientist J. Robert Oppenheimer recently observed: “One thing that is new is the prevalence of newness, the changing scale and scope of change itself, so that the world alters as we walk in it, so that the years of a man's life measure not some small growth or rearrangement or modification of what he learned in childhood, but a great upheaval.”

Psychiatrist Erik Erikson has put it thus: “Today, men over 50 owe their identity as individuals, as citizens, and as professional workers to a period when change had a different quality and

when a dominant view of the world was one of a one-way extension into a future of prosperity, progress, and reason. If they rebelled, they did so against details of this firm trend and often only for the sake of what they thought were even firmer ones. They learned to respond to the periodic challenge of war and revolution by reasserting the interrupted trend toward normalcy. What has changed in the meantime is, above all, the character of change itself.”

This new pace of change, which is not likely to slow down soon, has begun to affect every facet of American life. In our vocabulary, people now speak of being “on the move,” of “running around,” and of “go, go, go.” In our politics, we are witnessing a major realignment of the two-party system. Editor Max Ways of *Fortune* magazine has said, “Most American political and social issues today arise out of a concern over the pace and quality of change.” In our morality, many are becoming more “cool,” or uncommitted. If life changes swiftly, many think it wise not to get too attached or devoted to any particular set of beliefs or hierarchy of values.



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busy faculties, serious students, and hard courses

Of all American institutions, that which is most profoundly affected by the new tempo of radical change is the school. And, although all levels of schooling are feeling the pressure to change, those probably feeling it the most are our colleges and universities.

AT THE HEART of America's shift to a new life of constant change is a revolution in the role and nature of higher education. Increasingly, all of us live in a society shaped by our colleges and universities.

From the campuses has come the expertise to travel to the moon, to crack the genetic code, and to develop computers that calculate as fast as light. From the campuses has come new information about Africa's resources, Latin-American economics, and Oriental politics. In the past 15 years, college and university scholars have produced a dozen

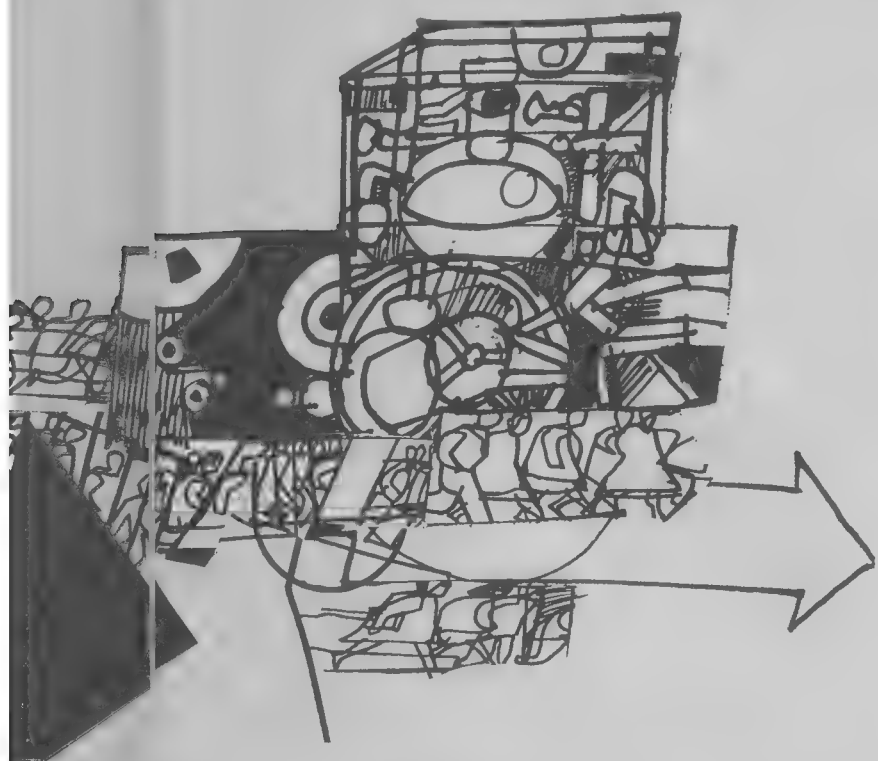
or more accurate translations of the Bible, more than were produced in the past 15 centuries. University researchers have helped virtually to wipe out three of the nation's worst diseases: malaria, tuberculosis, and polio. The chief work in art and music, outside of a few large cities, is now being done in our colleges and universities. And profound concern for the U.S. racial situation, for U.S. foreign policy, for the problems of increasing urbanism, and for new religious forms is now being expressed by students and professors inside the academies of higher learning.

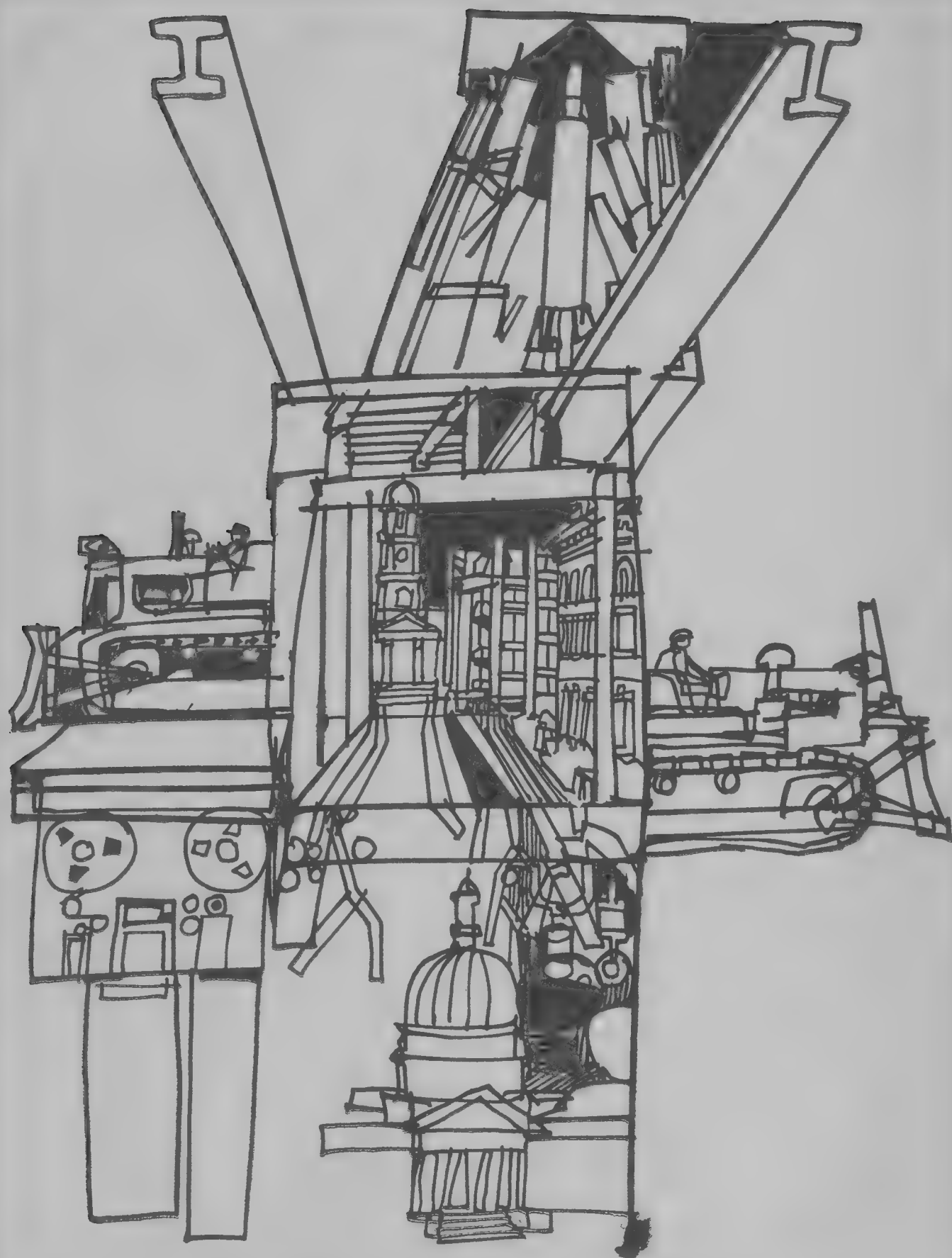
As American colleges and universities have been instrumental in creating a new world of whirlwind change, so have they themselves been subjected to unprecedented pressures to change. They are different places from what they were 15 years ago—in some cases almost unrecognizably different. The faculties are busier, the students more serious, and the courses harder. The campuses gleam with new buildings. While the shady-grove and paneled-library colleges used to spend nearly all of their time teaching the young, they have now been burdened with an array of new duties.

Clark Kerr, president of the University of California, has put the new situation succinctly: "The university has become a prime instrument of national purpose. This is new. This is the essence of the transformation now engulfing our universities."

The colleges have always assisted the national purpose by helping to produce better clergymen, farmers, lawyers, businessmen, doctors, and teachers. Through athletics, through religious and moral guidance, and through fairly demanding academic work, particularly in history and literature, the colleges have helped to keep a sizable portion of the men who have ruled America rugged, reasonably upright and public-spirited, and informed and sensible. The problem of an effete, selfish, or ignorant upper class that plagues certain other nations has largely been avoided in the United States.

But never before have the colleges and universities been expected to fulfill so many dreams and projects of the American people. Will we outdistance the Russians in the space race? It depends on the caliber





of scientists and engineers that our universities produce. Will we find a cure for cancer, for arthritis, for the common cold? It depends upon the faculties and the graduates of our medical schools. Will we stop the Chinese drive for world dominion? It depends heavily on the political experts the universities turn out and on the military weapons that university research helps develop. Will we be able to maintain our high standard of living and to avoid depressions? It depends upon whether the universities can supply business and government with inventive, imaginative, farsighted persons and ideas. Will we be able to keep human values alive in our machine-filled world? Look to college philosophers and poets. Everyone, it seems—from the impoverished but aspiring Negro to the mother who wants her children to be emotionally healthy—sees the college and the university as a deliverer, today.

Thus it is no exaggeration to say that colleges and universities have become one of our greatest resources in the cold war, and one of our greatest assets in the uncertain peace. America's schools have taken a new place at the center of society. Ernest Sirluck, dean of graduate studies at the University of Toronto, has said: "The calamities of recent history have undermined the prestige and authority of what used to be the great central institutions of society. . . . Many people have turned to the universities . . . in the hope of finding, through them, a renewed or substitute authority in life."

THE NEW PRESSURES to serve the nation in an ever-expanding variety of ways have wrought a stunning transformation in most American colleges and universities.

For one thing, they *look* different, compared with 15 years ago. Since 1950, American colleges and universities have spent about \$16.5 billion on new buildings. One third of the entire higher education plant in the United States is less than 15 years old. More than 180 completely new campuses are now being built or planned.

Scarcely a college has not added at least one building to its plant; most have added three, four, or more. (Science buildings, libraries, and dormitories have been the most desperately needed addi-

New responsibilities are transforming once-quiet campuses

tions.) Their architecture and placement have moved some alumni and students to howls of protest, and others to expressions of awe and delight.

The new construction is required largely because of the startling growth in the number of young people wanting to go to college. In 1950, there were about 2.2 million undergraduates, or roughly 18 percent of all Americans between 18 and 21 years of age. This academic year, 1965-66, there are about 5.4 million undergraduates—a whopping 30 percent of the 18-21 age group.* The total number of college students in the United States has more than doubled in a mere decade and a half.

As two officials of the American Council on Education pointed out, not long ago: "It is apparent that a permanent revolution in collegiate patterns has occurred, and that higher education has become and will continue to be the common training ground for American adult life, rather than the province of a small, select portion of society."

Of today's 5.4 million undergraduates, one in every five attends a kind of college that barely existed before World War II—the junior, or community, college. Such colleges now comprise nearly one third of America's 2,200 institutions of higher education. In California, where community colleges have become an integral part of the higher education scene, 84 of every 100 freshmen and sophomores last year were enrolled in this kind of institution. By 1975, estimates the U.S. Office of Education, one in every two students, nationally, will attend a two-year college.

Graduate schools are growing almost as fast.

*The percentage is sometimes quoted as being much higher because it is assumed that nearly all undergraduates are in the 18-21 bracket. Actually only 68 percent of all college students are in that age category. Three percent are under 18; 29 percent are over 21.

Higher education's patterns are changing; so are its leaders

While only 11 percent of America's college graduates went on to graduate work in 1950, about 25 percent will do so after their commencement in 1966. At one institution, over 85 percent of the recipients of bachelor's degrees now continue their education at graduate and professional schools. Some institutions, once regarded primarily as undergraduate schools, now have more graduate students than undergraduates. Across America, another phenomenon has occurred: numerous state colleges have added graduate schools and become universities.

There are also dramatic shifts taking place among the various *kinds* of colleges. It is often forgotten that 877, or 40 percent, of America's colleges and universities are related, in one way or another, with religious denominations (Protestant, 484; Catholic, 366; others, 27). But the percentage of the nation's students that the church-related institutions enroll has been dropping fast; last year they had 950,000 undergraduates, or only 18 percent of the total. Sixty-nine of the church-related colleges have fewer than 100 students. Twenty percent lack accreditation, and another 30 percent are considered to be academically marginal. Partially this is because they have been unable to find adequate financial support. A Danforth Foundation commission on church colleges and universities noted last spring: "The irresponsibility of American churches in providing for their institutions is deplorable. The average contribution of churches to their colleges is only 12.8 percent of their operating budgets."

Church-related colleges have had to contend with a growing secularization in American life, with the increasing difficulty of locating scholars with a religious commitment, and with bad planning from their sponsoring church groups. About planning, the Danforth Commission report observed: "No one



can justify the operation of four Presbyterian colleges in Iowa, three Methodist colleges in Indiana, five United Presbyterian institutions in Missouri, nine Methodist colleges in North Carolina (including two brand new ones), and three Roman Catholic colleges for women in Milwaukee."

Another important shift among the colleges is the changing position of private institutions, as public institutions grow in size and number at a much faster rate. In 1950, 50 percent of all students were enrolled in private colleges; this year, the private colleges' share is only 33 percent. By 1975, fewer than 25 percent of all students are expected to be

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by, but 15 years ago there were roughly 120,000 Negroes in college, 70 percent of them in predominantly Negro institutions; last year, according to Whitney Young, Jr., executive director of the National Urban League, there were 220,000 Negroes in college, but only 40 percent at predominantly Negro institutions.

THE REMARKABLE GROWTH in the number of students going to college and the shifting patterns of college attendance have had great impact on the administrators of the colleges and universities. They have become, at many institutions, a new breed of men.

Not too long ago, many college and university presidents taught a course or two, wrote important papers on higher education as well as articles and books in their fields of scholarship, knew most of the faculty intimately, attended alumni reunions, and spoke with heartiness and wit at student dinners, Rotary meetings, and football rallies. Now many presidents are preoccupied with planning their schools' growth and with the crushing job of finding the funds to make such growth possible.

Many a college or university president today is, above all else, a fund-raiser. If he is head of a private institution, he spends great amounts of time searching for individual and corporate donors; if he leads a public institution, he adds the task of legislative relations, for it is from the legislature that the bulk of his financial support must come.

With much of the rest of his time, he is involved in economic planning, architectural design, personnel recruitment for his faculty and staff, and curriculum changes. (Curriculums have been changing almost as substantially as the physical facilities, because the explosion in knowledge has been as sizable as the explosion in college admissions. Whole new fields such as biophysics and mathematical economics have sprung up; traditional fields have expanded to include new topics such as comparative ethnic music and the history of film; and topics that once were touched on lightly, such as Oriental studies or oceanography, now require extended treatment.)

To cope with his vastly enlarged duties, the mod-

enrolled in the non-public colleges and universities.

Other changes are evident: More and more students prefer urban colleges and universities to rural ones; now, for example, with more than 400,000 students in her colleges and universities, America's greatest college town is metropolitan New York. Coeducation is gaining in relation to the all-men's and the all-women's colleges. And many predominantly Negro colleges have begun to worry about their future. The best Negro students are sought after by many leading colleges and universities, and each year more and more Negroes enroll at integrated institutions. Precise figures are hard to come

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Many professors are research-minded specialists

ern college or university president has often had to double or triple his administrative staff since 1950. Positions that never existed before at most institutions, such as campus architects, computer programmers, government liaison officials, and deans of financial aid, have sprung up. The number of institutions holding membership in the American College Public Relations Association, to cite only one example, has risen from 591 in 1950 to more than 1,000 this year—including nearly 3,000 individual workers in the public relations and fund-raising field.

A whole new profession, that of the college “development officer,” has virtually been created in the past 15 years to help the president, who is usually a transplanted scholar, with the twin problems of institutional growth and fund-raising. According to Eldredge Hiller, executive director of the American Association of Fund-Raising Counsel, “In 1950 very few colleges and universities, except those in the Ivy League and scattered wealthy institutions, had directors or vice presidents of development. Now there are very few institutions of higher learning that do not.” In addition, many schools that have been faced with the necessity of special development projects or huge capital campaigns have sought expertise and temporary personnel from outside development consultants. The number of major firms in this field has increased from 10 to 26 since 1950, and virtually every firm’s staff has grown dramatically over the years.

Many alumni, faculty members, and students who have watched the president’s suite of offices expand have decried the “growing bureaucracy.” What was once “old President Doe” is now “The Administration,” assailed on all sides as a driving, impersonal, remote organization whose purposes and procedures are largely alien to the traditional world of academe.

No doubt there is some truth to such charges. In their pursuit of dollars to raise faculty salaries and to pay for better facilities, a number of top officials at America’s colleges and universities have had insufficient time for educational problems, and some have been more concerned with business efficiency

than with producing intelligent, sensible human beings. However, no one has yet suggested how “prexy” can be his old, sweet, leisurely, scholarly self and also a dynamic, farsighted administrator who can successfully meet the new challenges of unprecedented, radical, and constant change.

One president in the Midwest recently said: “The engineering faculty wants a nuclear reactor. The arts faculty needs a new theater. The students want new dormitories and a bigger psychiatric consulting office. The alumni want a better faculty and a new gymnasium. And they all expect me to produce these out of a single office with one secretary and a small filing cabinet, while maintaining friendly contacts with them all. I need a magic lantern.”

Another president, at a small college in New England, said: “The faculty and students claim they don’t see much of me any more. Some have become vituperative and others have wondered if I really still care about them and the learning process. I was a teacher for 18 years. I miss them—and my scholarly work—terribly.”

THE ROLE AND PACE of the professors have changed almost as much as the administrators’, if not more, in the new period of rapid growth and radical change.

For the most part, scholars are no longer regarded as ivory-tower dreamers, divorced from society. They are now important, even indispensable, men and women, holding keys to international security, economic growth, better health, and cultural excellence. For the first time in decades, most of their salaries are approaching respectability. (The national average of faculty salaries has risen from \$5,311 in 1950 to \$9,317 in 1965, according to a survey conducted by the American Association of University Professors.) The best of them are pursued by business, government, and other colleges. They travel frequently to speak at national conferences on modern music or contemporary urban



problems, and to international conferences on particle physics or literature.

In the classroom, they are seldom the professors of the past: the witty, cultured gentlemen and ladies—or tedious pedants—who know Greek, Latin, French, literature, art, music, and history fairly well. They are now earnest, expert specialists who know algebraic geometry or international monetary economics—and not much more than that—*exceedingly* well. Sensing America's needs, a growing number of them are attracted to research, and many prefer it to teaching. And those who are not attracted are often pushed by an academic "rating system" which, in effect, gives its highest rewards and promotions to people who conduct research and write about the results they achieve. "Publish or perish" is the professors' succinct, if somewhat overstated, way of describing how the system operates.

Since many of the scholars—and especially the youngest instructors—are more dedicated and "focused" than their predecessors of yesteryear, the allegiance of professors has to a large degree shifted from their college and university to their academic discipline. A radio-astronomer first, a Siwash professor second, might be a fair way of putting it.

There is much talk about giving control of the universities back to the faculties, but there are strong indications that, when the opportunity is offered, the faculty members don't want it. Academic decision-making involves committee work, elaborate investigations, and lengthy deliberations—time away from their laboratories and books. Besides, many professors fully expect to move soon, to another college or to industry or government, so why bother about the curriculum or rules of student conduct? Then, too, some of them plead an inability to take part in broad decision-making since they are expert in only one limited area. "I'm a geologist," said one professor in the West. "What would I know about admissions policies or student demonstrations?"

Professors have had to narrow their scholarly interests chiefly because knowledge has advanced to a point where it is no longer possible to master more than a tiny portion of it. Physicist Randall Whaley, who is now chancellor of the University of Missouri at Kansas City, has observed: "There is about 100 times as much to know now as was available in 1900. By the year 2000, there will be over 1,000 times as much." (Since 1950 the number of scholarly periodicals has increased from 45,000 to

95,000. In science alone, 55,000 journals, 60,000 books, and 100,000 research monographs are published annually.) In such a situation, fragmentation seems inevitable.

Probably the most frequently heard cry about professors nowadays, even at the smaller colleges, is that they are so research-happy that they neglect teaching. "Our present universities have ceased to be schools," one graduate student complained in the *Harvard Educational Review* last spring. Similar charges have stirred pulses at American colleges and universities coast to coast, for the past few years.

No one can dispute the assertion that research has grown. The fact is, it has been getting more and more attention since the end of the Nineteenth Century, when several of America's leading universities tried to break away from the English college tradition of training clergymen and gentlemen, primarily through the classics, and to move toward the German university tradition of rigorous scholarship and scientific inquiry. But research has proceeded at runaway speed since 1950, when the Federal Government, for military, political, economic, and public-health reasons, decided to support scientific and technological research in a major way. In 1951 the Federal Government spent \$295 million in the colleges and universities for research and development. By 1965 that figure had grown to \$1.7 billion. During the same period, private philanthropic foundations also increased their support substantially.

At bottom, the new emphasis on research is due to the university's becoming "a prime instrument of national purpose," one of the nation's chief means of maintaining supremacy in a long-haul cold war. The emphasis is not likely to be lessened. And more and more colleges and universities will feel its effects.

BUT WHAT ABOUT *education*—the teaching of young people—that has traditionally been the basic aim of our institutions of higher learning?

Many scholars contend, as one university president put it, that "current research commitments are far more of a positive aid than a detriment to teaching," because they keep teachers vital and at

The push to do research: Does it affect teaching?

the forefront of knowledge. "No one engaged in research in his field is going to read decade-old lecture notes to his class, as many of the so-called 'great professors' of yesterday did," said a teacher at a university in Wisconsin.

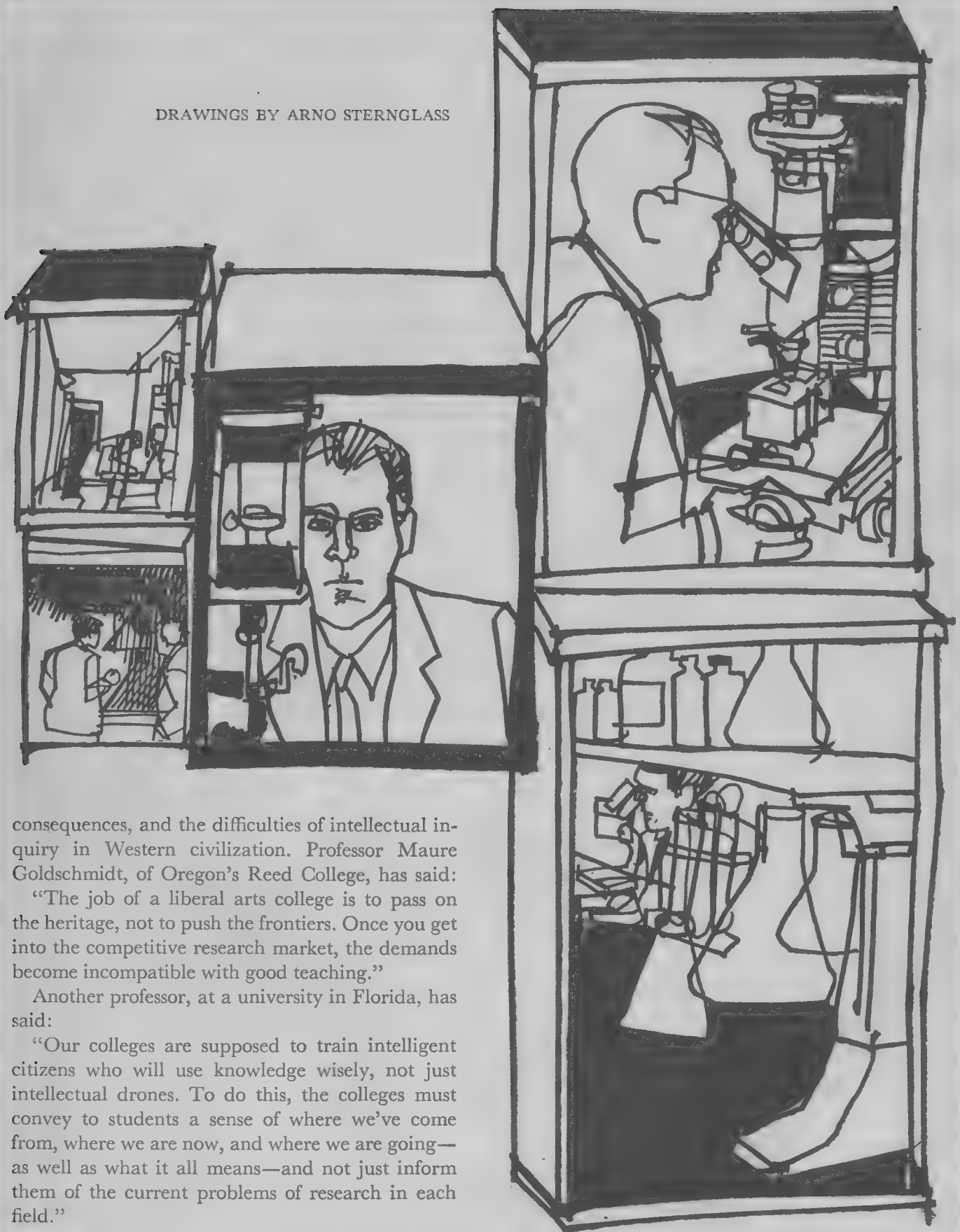
Others, however, see grave problems resulting from the great emphasis on research. For one thing, they argue, research causes professors to spend less time with students. It also introduces a disturbing note of competitiveness among the faculty. One physicist has put it this way:

"I think my professional field of physics is getting too hectic, too overcrowded; there is too much pressure for my taste. . . . Research is done under tremendous pressure because there are so many people after the same problem that one cannot afford to relax. If you are working on something which 10 other groups are working on at the same time, and you take a week's vacation, the others beat you and publish first. So it is a mad race."

Heavy research, others argue, may cause professors to concentrate narrowly on their discipline and to see their students largely in relation to it alone. Numerous observers have pointed to the professors' shift to more demanding instruction, but also to their more technical, pedantic teaching. They say the emphasis in teaching may be moving from broad understanding to factual knowledge, from community and world problems to each discipline's tasks, from the releasing of young people's minds to the cramming of their minds with the stuff of each subject. A professor in Louisiana has said, "In modern college teaching there is much more of the 'how' than the 'why.' Values and fundamentals are too interdisciplinary."

And, say the critics, research focuses attention on the new, on the frontiers of knowledge, and tends to forget the history of a subject or the tradition of intellectual inquiry. This has wrought havoc with liberal arts education, which seeks to introduce young people to the modes, the achievements, the

DRAWINGS BY ARNO STERNGLASS



consequences, and the difficulties of intellectual inquiry in Western civilization. Professor Maure Goldschmidt, of Oregon's Reed College, has said:

"The job of a liberal arts college is to pass on the heritage, not to push the frontiers. Once you get into the competitive research market, the demands become incompatible with good teaching."

Another professor, at a university in Florida, has said:

"Our colleges are supposed to train intelligent citizens who will use knowledge wisely, not just intellectual drones. To do this, the colleges must convey to students a sense of where we've come from, where we are now, and where we are going—as well as what it all means—and not just inform them of the current problems of research in each field."

Somewhat despairingly, Professor Jacques Barzun recently wrote:

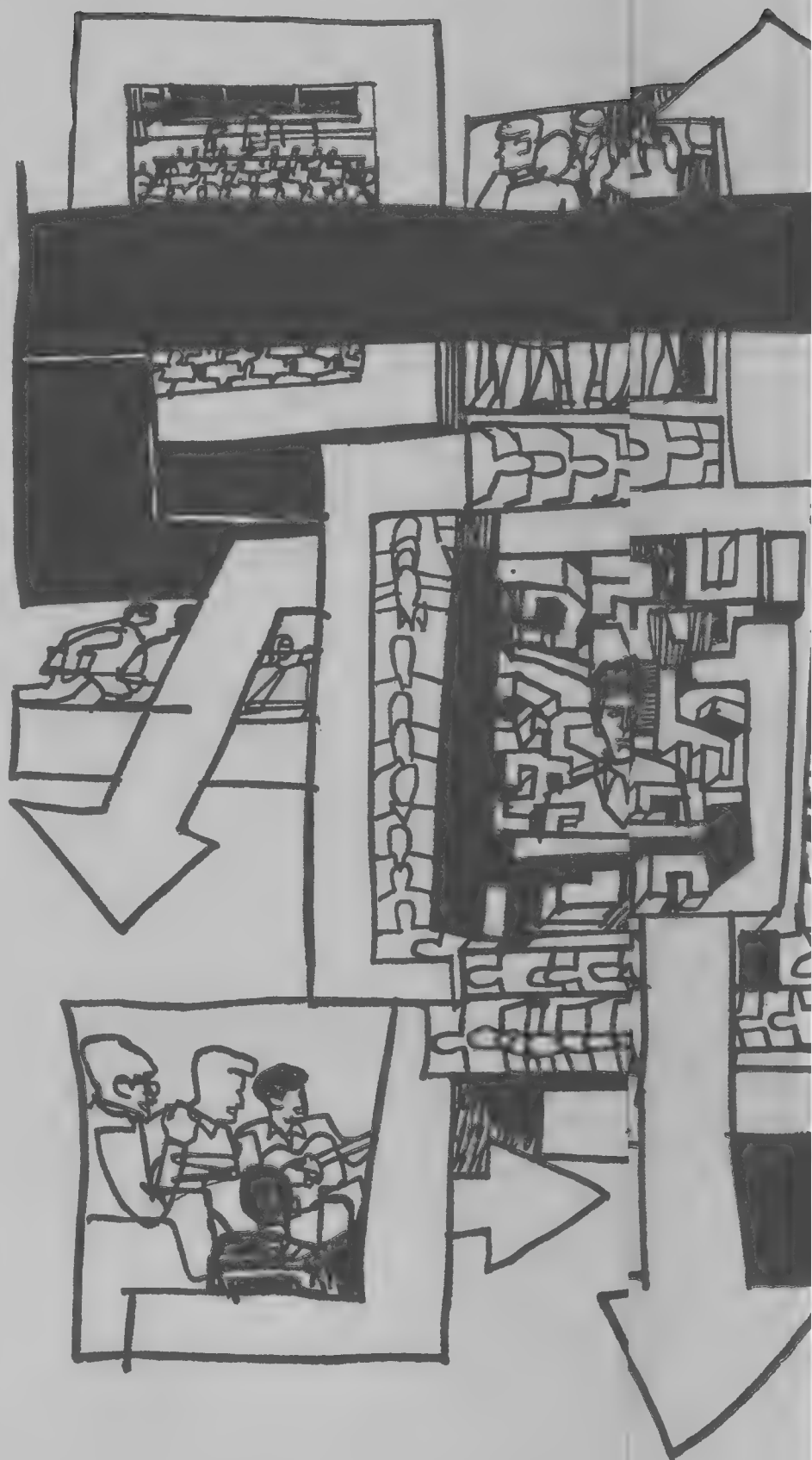
"Nowadays the only true believers in the liberal arts tradition are the men of business. They *really* prefer general intelligence, literacy, and adaptability. They know, in the first place, that the conditions of their work change so rapidly that no college courses can prepare for them. And they also know how often men in mid-career suddenly feel that their work is not enough to sustain their spirits."

Many college and university teachers readily admit that they may have neglected, more than they should, the main job of educating the young. But they just as readily point out that their role is changing, that the rate of accumulation of knowledge is accelerating madly, and that they are extremely busy and divided individuals. They also note that it is through research that more money, glory, prestige, and promotions are best attained in their profession.

For some scholars, research is also where the highest excitement and promise in education are to be found. "With knowledge increasing so rapidly, research is the only way to assure a teacher that he is keeping ahead, that he is aware of the really new and important things in his field, that he can be an effective teacher of the next generation," says one advocate of research-*cum*-instruction. And, for some, research is the best way they know to serve the nation. "Aren't new ideas, more information, and new discoveries most important to the United States if we are to remain free and prosperous?" asks a professor in the Southwest. "We're in a protracted war with nations that have sworn to bury us."

THE STUDENTS, of course, are perplexed by the new academic scene.

They arrive at college having read the catalogues and brochures with their decade-old paragraphs about "the importance of each individual" and "the many student-faculty relationships"—and having heard from alumni some rosy stories about the leisurely, friendly, pre-war days at Quadrangle U. On some campuses, the reality almost lives up to the expectations. But on others, the students are





The students react to "the system" with fierce independence

dismayed to discover that they are treated as merely parts of another class (unless they are geniuses, star athletes, or troublemakers), and that the faculty and deans are extremely busy. For administrators, faculty, and alumni, at least, accommodating to the new world of radical change has been an evolutionary process, to which they have had a chance to adjust somewhat gradually; to the students, arriving fresh each year, it comes as a severe shock.

Forced to look after themselves and gather broad understanding outside of their classes, they form their own community life, with their own values and methods of self-discovery. Piqued by apparent adult indifference and cut off from regular contacts with grown-up dilemmas, they tend to become more outspoken, more irresponsible, more independent. Since the amount of financial aid for students has tripled since 1950, and since the current condition of American society is one of affluence, many students can be independent in expensive ways: twist parties in Florida, exotic cars, and huge record collections. They tend to become more sophisticated about those things that they are left to deal with on their own: travel, religion, recreation, sex, politics.

Partly as a reaction to what they consider to be adult dedication to narrow, selfish pursuits, and partly in imitation of their professors, they have become more international-minded and socially conscious. Possibly one in 10 students in some colleges works off-campus in community service projects—tutoring the poor, fixing up slum dwellings, or singing and acting for local charities. To the consternation of many adults, some students have become a force for social change, far away from their colleges, through the Peace Corps in Bolivia or a picket line in another state. Pressured to be brighter than any previous generation, they fight to

feel as *useful* as any previous generation. A student from Iowa said: "I don't want to study, study, study, just to fill a hole in some government or industrial bureaucracy."

The students want to work out a new style of academic life, just as administrators and faculty members are doing; but they don't know quite how, as yet. They are burying the rah-rah stuff, but what is to take its place? They protest vociferously against whatever they don't like, but they have no program of reform. Restless, an increasing number of them change colleges at least once during their undergraduate careers. They are like the two characters in Jack Kerouac's *On the Road*. "We got to

go and never stop till we get there," says one. "Where are we going, man?" asks the other. "I don't know, but we gotta go," is the answer.

As with any group in swift transition, the students are often painfully confused and contradictory. A *Newsweek* poll last year that asked students whom they admired most found that many said "Nobody" or gave names like Y. A. Tittle or Joan Baez. It is no longer rare to find students on some campuses dressed in an Ivy League button-down shirt, farmer's dungarees, a French beret, and a Roman beard—all at once. They argue against large bureaucracies, but most turn to the industrial giants, not to smaller companies or their own business ventures,



The alumni lament: We don't recognize the place

when they look for jobs after graduation. They are critical of religion, but they desperately seek people, courses, and experiences that can reveal some meaning to them. An instructor at a university in Connecticut says: "The chapel is fairly empty, but the religion courses are bulging with students."

Caught in the rapids of powerful change, and left with only their own resources to deal with the rush, the students tend to feel helpless—often too much so. Sociologist David Riesman has noted: "The students know that there are many decisions out of their conceivable control, decisions upon which their lives and fortunes truly depend. But . . . this truth, this insight, is over-generalized, and, being believed, it becomes more and more 'true'." Many students, as a result, have become grumblers and cynics, and some have preferred to withdraw into private pads or into early marriages. However, there are indications that some students are learning how to be effective—if only, so far, through the largely negative methods of disruption.

IF THE FACULTIES AND THE STUDENTS are perplexed and groping, the alumni of many American colleges and universities are positively dazed. Everything they have revered for years seems to be crumbling: college spirit, fraternities, good manners, freshman customs, colorful lectures, singing, humor magazines and reliable student newspapers, long talks and walks with professors, daily chapel, dinners by candlelight in formal dress, reunions that are fun. As one alumnus in Tennessee said, "They keep asking me to give money to a place I no longer recognize." Assaulted by many such remarks, one development officer in Massachusetts countered: "Look, alumni have seen America and the world change. When the old-timers went to school there were no television sets, few cars and fewer airplanes, no nuclear weapons, and no Red China. Why should colleges alone stand still? It's partly our fault, though. We traded too long on sentiment

rather than information, allegiance, and purpose."

What some alumni are beginning to realize is that they themselves are changing rapidly. Owing to the recent expansion of enrollments, nearly one half of all alumni and alumnae now are persons who have been graduated since 1950, when the period of accelerated change began. At a number of colleges, the song-and-revels homecomings have been turned into seminars and discussions about space travel or African politics. And at some institutions, alumni councils are being asked to advise on and, in some cases, to help determine parts of college policy.

Dean David B. Truman, of New York's Columbia College, recently contended that alumni are going to have to learn to play an entirely new role *vis-à-vis* their alma maters. The increasingly mobile life of most scholars, many administrators, and a growing number of students, said the dean, means that, if anyone is to continue to have a deep concern for the whole life and future of each institution, "that focus increasingly must come from somewhere outside the once-collegial body of the faculty"—namely, from the alumni.

However, even many alumni are finding it harder to develop strong attachments to one college or university. Consider the person who goes to, say, Davidson College in North Carolina, gets a law degree from the University of Virginia, marries a girl who was graduated from Wellesley, and settles in Albuquerque, New Mexico, where he pays taxes to help support the state university. (He pays Federal taxes, too, part of which goes, through Government grants and contracts, to finance work at hundreds of other colleges and universities.)

Probably the hardest thing of all for many alumni—indeed, for people of all loyalties—to be reconciled to is that we live in a new era of radical change, a new time when almost nothing stands still for very long, and when continual change is the normal pattern of development. It is a terrible fact to face openly, for it requires that whole chunks of our traditional way of thinking and behaving be revised.

Take the standard chore of defining the purpose of any particular college or university. Actually,

some colleges and universities are now discarding the whole idea of statements of purpose, regarding their main task as one of remaining open-ended to accommodate the rapid changes. "There is no single 'end' to be discovered," says California's Clark Kerr. Many administrators and professors agree. But American higher education is sufficiently vast and varied to house many—especially those at small colleges or church-related institutions—who differ with this view.

What alumni and alumnae will have to find, as will everyone connected with higher education, are some new norms, some novel patterns of behavior by which to navigate in this new, constantly innovating society.

For the alumni and alumnae, then, there must be an ever-fresh outlook. They must resist the inclination to howl at every departure that their alma mater makes from the good old days. They need to see their alma mater and its role in a new light. To remind professors about their obligations to teach students in a stimulating and broadening manner may be a continuing task for alumni; but to ask the faculty to return to pre-1950 habits of leisurely teaching and counseling will be no service to the new academic world.

In order to maintain its greatness, to keep ahead, America must innovate. To innovate, it must conduct research. Hence, research is here to stay. And so is the new seriousness of purpose and the intensity

of academic work that today is so widespread on the campuses.

Alumni could become a greater force for keeping alive at our universities and colleges a sense of joy, a knowledge of Western traditions and values, a quest for meaning, and a respect for individual persons, especially young persons, against the mounting pressures for sheer work, new findings, mere facts, and bureaucratic depersonalization. In a period of radical change, they could press for some enduring values amidst the flux. In a period focused on the new, they could remind the colleges of the virtues of teaching about the past.

But they can do this only if they recognize the existence of rapid change as a new factor in the life of the nation's colleges; if they ask, "*How and what kind of change?*" and not, "*Why change?*"

"It isn't easy," said an alumnus from Utah. "It's like asking a farm boy to get used to riding an escalator all day long."

One long-time observer, the editor of a distinguished alumni magazine, has put it this way:

"We—all of us—need an entirely new concept of higher education. Continuous, rapid change is now inevitable and normal. If we recognize that our colleges from now on will be perpetually changing, but not in inexorable patterns, we shall be able to control the direction of change more intelligently. And we can learn to accept our colleges on a wholly new basis as centers of our loyalty and affection."

The report on this and the preceding 15 pages is the product of a cooperative endeavor in which scores of schools, colleges, and universities are taking part. It was prepared under the direction of the group listed below, who form EDITORIAL PROJECTS FOR EDUCATION, a non-profit organization associated with the American Alumni Council.

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VICE-PRESIDENT'S REPORT TO CONVOCATION

PART I

For some years, it has been a tradition that the President of the University give an annual report to the members of Convocation on the activities of the University. Although President Johns is well on his way to recovery from his recent illness, he will not be back at work for some weeks, I, therefore must take his place. When the University was small, and our activities were few, it was relatively easy to give an annual report that was meaningful and reasonably complete. Today, our university is large, our activities are many, and it is now neither possible nor desirable to give at a ceremony of this kind, an annual report that lies within the traditional meaning of this term.

On April 1, 1966, a new Universities Act became effective. This Act has abolished Convocation as a group of people, and has now defined Convocation to be a ceremony. I am, therefore, somewhat embarrassed, Eminent Chancellor, to stand before you as an ersatz President giving a fraudulent report to a group of people who no longer exist. I shall not, however, be at a loss for words.

Although the University motto "whatsoever things are true" was well chosen, a small change to read "Whatsoever things might be true are worthy of contemplation", would more accurately describe the work of a university. We seek the truth with the calm assurance that it is worth seeking, even though it must be recognized that this elusive reality will always escape the work of mortal man.

We, like our biblical forefathers, are trying to build a tower of Babel, a tower that will reach into the sky and unlock the secrets of heaven.

Like them, we shall fail. The algebra of thought does not follow all of the normally accepted rules of logic, and, in particular, the law of the excluded middle does not apply. There is now, and always will be, one addition to the known and unknown, namely the unknowable. The universe in which we live is indeterministic, and it is a universe in which man does not have the criteria to recognize absolute truth, even if he were, by accident, to find it.

Although philosophy has long recognized the severe limitations on the ability of man to acquire knowledge, there exists the belief that the work of man will lead him toward the truth in some asymptotic manner. This belief is probably false.

Our fathers tried to build a tower of Babel, brick by brick, with industry and care, secure in a belief that they would create an edifice which would surely lead their sons and daughters closer to the truth.

They did not realize that building any structure too far in a single direction will always cause that structure to collapse, and all that will remain is a history of failure, a history of mistakes that should not be repeated.

At the end of the nineteenth century man rested secure in a belief that the universe was adequately described by the Euclidean concepts of geometry, and one could point with pride to 2,000 years of verification of such a belief. Suddenly a man was saying, and others were believing, that this concept was false, and that our universe could only be described by a weird kind of Riemannian geometry, a geometry in which rulers and watches were not really different kinds of measuring instruments, a geometry in which space and time merged into a single entity. Out of his weird concept of the universe, atomic energy first became an idea in the minds of men, and then about 40 years later, became a reality for the whole world to see. The lesson that most people overlook in this story of atomic energy is that a whole structure of human thought, built so painstakingly by so many people, came tumbling down, and the twentieth century was forced to begin, from the beginning, to build its own tower of Babel. We are not adding to the tower our fathers built, and we will certainly not rebuild the structure that seemed so important to them.

Knowledge is not an accumulation of factual information, information to be stored and used when necessary. Indeed, man destroys the wisdom of the ages at a rate that is faster than the rate at which he can discover new knowledge. We need

EDITOR'S NOTE: The President's Reports to Convocation, Parts I and II, were of a quite different nature this Spring.

Due to the illness of Dr. Johns, they were delivered by Dr. Max Wyman, Vice-President (Academic) of the University. The tenor and content of the Reports were of such interest that The New Trail takes pleasure in reproducing each in full, Part I in this issue, and Part II in the summer edition of the magazine.

not fear, as some people believe, that new knowledge is being created at a rate that will swamp us, and that the time is coming when we must extend the initial periods students must spend to obtain degrees. Society must clearly recognize the obsolescence of knowledge, and that it must provide a mechanism for continuing education, a means by which people will be trained, retrained, and retrained once again, to do the things our society now requires, and will require in the future.

There is a second part of the story of Babel which should not be overlooked. The curse of Babel must not be allowed to descend on us. In universities many jargonistic languages are spoken, and proper communication among us is becoming difficult to maintain. Worse than this, proper communication between our University and the public that supports the University is slowly grinding to a halt. We no longer speak in Esperanto, a language that all are supposed to understand. Until we do, it will not be possible to tell the public of our aims, and to explain properly our aspirations. This, in my opinion, is one of the major reasons for the severe criticisms one now reads of universities, and is certainly one of the reasons why so many people feel that the emphasis on research is misplaced, and that there is a constant flight from teaching. The ultimate in this kind of thinking can be found in William Faulkner's description of his duties as "writer-in-residence" at The University of Virginia. Faulkner said that he wasn't required to write, read, or teach anything. He did feel obliged, however, to walk across the campus twice a day, suitably attired in tweeds, so that students could jab each other in wonder and delight, and say "There he is", "There he goes".

These things are not true at our University, and I doubt that they are true at any of the major universities in the world.

The shaping of the thought of students demands that we teach them to have the proper respect and the proper disrespect for the knowledge



Honorary LL.D. degrees were conferred on two distinguished gentlemen at The University of Alberta's fifty-sixth Convocation, Part I, held in the Jubilee Auditorium in May. Seen with the Chancellor of the University are the honorary degree recipients, left to right: the Honorable J. W. MacEwan, Lieutenant-Governor of Alberta, who delivered the Convocation address; Professor Alfred L. Burt, a former Rhodes Scholar and member of the history department at the University in 1913 where he taught for seventeen years; Dr. C. M. Macleod, Chairman of the Board of Governors; and Dr. E. P. Galbraith, Chancellor of the University.

of our day. It demands that we simultaneously teach students to accept and reject dogma, and more important, to know when to accept and when to reject. This is a demanding task to ask of our staff, and is an even more demanding task to ask of our students. Such a goal can only be accomplished in a research atmosphere, and students must see with their own eyes how useful the knowledge of our day can be, and at the same time, and in spite of its usefulness, students must see how this self-same knowledge is continually being destroyed, and, through research, is continually being replaced. It is nonsense to believe that a person who is guiding ten students through the mysteries of research is somehow doing less for society than a person who is teaching hundreds of students at a somewhat lower level. Both of these tasks are necessary, and both persons have a rightful place in a modern university. The fact that a Nobel Prize winner may surround himself with only a handful of students is not a symptom of disease. It is an attribute of the type of work he or she is doing for

society, a type of work that often demands endless hours of solitude, and endless hours free of interruption.

Since I must give another report to another convocation, I have confined my remarks of today to those of a general nature, and have made no attempt to describe any of the specific activities of any specific group of members of our staff or students. There is, however, a small, select group who will in a sense graduate today, and who should receive special mention. I speak of the members of the Board of Governors.

With the adoption of the new Universities Act, it seems reasonably certain that few of the present members of the Board of Governors will retain their present positions, and so the time has come to thank a group of dedicated people for the work they have done for this Province.

There is an inherent distrust between Boards of Governors and staffs of universities, a distrust that stems from the usual animosities that often exist in industry between management-employee groups.

However, our Board has, by its vision, managed to bridge this natural gulf, and now enjoys the respect of a vast majority of members of our staff.

This Board has given this University a form of university self-government that will be a model for other universities to follow. It was one of the first groups to recognize in a tangible way the needs of graduate education, and to obtain from the people of Alberta, through their government, the financial support for policies that were, in the first instance, the source of envy of other Canadian universities, and later became the adopted policies of other universities in Canada. During the past year, the Board has recognized the need to continue the education of the members of the staff of this University. Through generous leave regulations, about 5% of our staff will always be away studying, and will be able to bring to our students the latest developments from all countries of the world.

President Johns and the other members of the staff of our University look upon the graduation of our present Board with considerable regret. In saying thank you to these men and women, we would like to say that they have helped the staff build a university in which the proper perspective of the value of knowledge exists and they have helped create a heritage for the children of Alberta, a heritage that is worth having.

OLD TRAILS—1946

It was announced that the new alumni secretary was to be J. C. G. Brown, '45.

With the approach of the largest registration in the history of the University, unusual preparations were being made on all sides. About 1,000 students were to be housed at the U.S. Airbase, and a housing bureau has been at work trying to locate every available room in Garneau. Four Nissen huts had been erected as well as several army units. These were located west of the north lab, across the walk from the cafeteria.



GLADYS AND MERRILL MUTTART FOUNDATION GIFT

A \$50,000 gift from the Gladys and Merrill Muttart Foundation has been made to the Department of Clinical Medicine, Faculty of Medicine, to assist in the support of a clinical unit for the study of diabetes mellitus and its related disorders.

This is the first unit of its kind in Canada. The presentation was made recently by Mr. and Mrs. Muttart to President W. H. Johns, left, and Dr. Donald R. Wilson, right, head of the Department of Medicine.

The objectives of the unit will be to encourage diabetic research, the education and training of physicians with special interests in this area of medicine, and the improvement of the care and treatment of diabetic patients.

Mrs. Muttart, a partner in the Muttart Foundation, has served widely in the field of diabetic work. From 1954-1957 she was National President of the Canadian Diabetic Association and is currently Honorary President of the Alberta division of the C.D.A.

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UNIVERSITY PENNANTS AND OFFICIAL CRESTS

THIS DEPARTMENT IS OWNED AND OPERATED BY THE UNIVERSITY OF ALBERTA



Since the granting of the Hudson's Bay Company's charter in 1670, traders, seamen and adventurers of the Company helped to shape the history of Canada. Since the establishment of the Bay's first department stores—Winnipeg in 1881 and Edmonton in 1890—the Bay has progressed with the country. Now, as in the past, the Bay continues to serve Canadians with foresight and integrity. Your satisfaction is assured when you shop at the Bay.

on the CAMPUS

After the rush and bustle of Spring Convocation things have settled back to near normal on the campus.

This year there was a sharp break with tradition at the Spring festivities. For the first time in ten years the sun didn't shine. However, this didn't deter close to 1,600 graduands who received degrees during the two day ceremonies at the Jubilee Auditorium.

At Convocation Part 1, **Hon. Grant McEwan**, Lt. Gov. of Alberta, and **Professor A. L. Burt**, author and former head of the U. of A. history department received honorary Doctor of Laws degrees.

At the Part II ceremonies Honorary Doctor of Laws degrees were conferred on **Mrs. Kate Andrews**, pioneer Alberta educator, and **G. R. A. Rice**, President and General Manager of the Sunwapta Broadcasting Company.

Due to the sudden illness of **Dr. E. P. Scarlett**, Calgary, the Alumni Golden Jubilee Award was presented in absentia by **Mr. George Ross**, President of the Alumni Association.

Winners of ten fellowships awarded under the British American Oil Fellowship—Scholarship plan and available to Canadian graduate students for the 1966-67 academic year were announced recently by the Association of Universities and Colleges of Canada.

This year's recipients included **Arthur O. Olson**, Cranford, Alberta, an M.Sc. candidate in plant biochemistry, and **John O. Towler**, Edmonton, a Ph.D. candidate in education.

The Canada Council has announced the names of 57 winners in the Council's Senior Fellowships Competition, in the areas of the humanities and the social sciences. These awards go to established scholars and members of University staffs engaged in independent research or other forms of creative scholarship. Fellowship winners from the U. of A. are **Dr. I. Moravcik** and **Dr. R. G. Baldwin**. Their programs and places of tenure will be: Moravcik, Economic Planning in Czechoslovakia, Prague; and Baldwin, 17th century English, London, England. Other recipients include

former staff members and graduates of the U. of A.—**Dr. H. B. Mayo**, Western Ontario, (Political Science), England and Europe; and **S. R. Mealing**, 1949, Carleton, History of Higher Education in Canada.

Dr. Walter C. MacKenzie, Dean of Medicine since 1959, was accorded an honorary degree from Dalhousie University, his Alma Mater, in May. Dr. MacKenzie is currently President of the American College of Surgeons.

Dr. John P. Bowland, professor of animal nutrition, has been awarded the Borden Award of the Nutrition Society of Canada for 1966. The research for which Dr. Bowland was being recognized has been mainly in the field of swine nutrition and metabolism. He has studied all of the major physiological activities of this species

—growth, fattening, reproduction, and lactation, and during the past five years has published or had accepted for publication 21 scientific papers in these areas.

Professor **Charles S. Brant** has been awarded a research grant by the Canada Council to support summer research in Greenland on eskimo education and cultural change.

A Doctor of Musical Arts degree from the University of Southern California was conferred this Spring on **Arthur B. Crighton**, Associate Professor of Music at the University. Professor Crighton joined the University staff in Edmonton in 1949, and received his baccalaureate in music from the University of Toronto in 1949 and his master of music degree from the University of Southern California in 1964.

Dr. R. B. J. Macnab, Faculty of Physical Education, has recently been appointed Canada's representative on the international committee for the Standardization of Physical Fitness Tests, a sub-committee of the International Academy of Sport Sciences. **Dr. M. L. Howell**, also on the Physical Education staff, is the only other Canadian representative. Drs. Macnab and Howell were recent recipients of a Department of National Health and Welfare grant of \$29,000 to study the work capacity of Canadian children.



The Rutherford Library recently commemorated the millenium of Christianity in Poland with a display of Polish history, biography, culture, and folk-art. The display was arranged by Mrs. Hanka Bednarski of the Library staff (seen in photo). Just prior to World War II Mrs. Bednarski spent a year in England studying in the British Museum while preparing her master's thesis in philosophy. She returned to Warsaw during the fateful month of August, 1939, when Nazi panzer divisions began the invasion of Poland. The invaders closed down the University of Warsaw and made it a criminal offence for any Pole to seek higher education. Mrs. Bednarski sat for her oral thesis examination at a clandestine gathering of professors in a private home, and was granted her master's degree which was given post-war recognition by the reconstituted University.

ALUMNI

'25

J. C. Mahaffy, Q.C., has been elected President of the Alberta Gas Trunk Line Company Limited.

A distinguished alumnus of the University and a medical authority in the field of dermatology, **Dr. George M. Lewis** passed away recently in New York Hospital. Last year Dr. Lewis was awarded in absentia the Outstanding Achievement Award by the Medical Alumni Association.

Dr. Lewis was Head of the Dermatology department at New York Hospital and Cornell University Medical College from 1942 to 1962. He retired from practice a year ago.

'29

A short note received recently from **James A. Campbell** stated that he is now living in Bermuda and liking it very much. Mr. and Mrs. Campbell have as their address "Sea Mew", Harbour Road, Warwick, Bermuda.

Calgary born **Eric S. Austin** in the first Canadian president of Hudson Bay Mining & Smelting Company, Winnipeg. Mr. Austin was appointed general manager in 1959 and elected director and vice-president of the Company in 1961.

Gordon H. Allen, Q.C., a Calgary corporation lawyer, has been appointed to the appellate division of the Supreme Court of Alberta.

'33

Dr. George Sinclair, professor of electrical engineering at the University of Toronto has been voted the Distinguished Alumnus Award at Ohio State University. Dr. Sinclair is noted for his contributions to the theory of antenna design and particularly the design of antennas for radar and for two-way-communications systems.

'37

J. F. M. Douglas has been appointed director of corporate services for the C. M. & S. Company of Canada, Montreal.

'40

Major General Bruce F. MacDonald has been posted from West Pakistan to an appointment as Commandant of the Canadian Army Staff College at Fort Frontenac.

'41

J. R. Ogilvie has joined the staff of Associated Engineering Services Limited and will serve as chief structural engineer in their Regina office.

'43

J. E. Bromley, formerly associate director of the Chemstrand Company at Pensacola, Florida, has been appointed technical director of the company.

E. B. Wilkins, of the British Columbia Department of Highways, was in New Zealand for five weeks in February and March on a W. A. Stevenson Travel Award.

'44

R. E. Harris has been appointed vice-president of the British American Oil Company Limited.

'46

Professor Raymond U. Lemieux will direct research under a 1966 grant from the Corn Industries Research Foundation.

Dr. Lemieux, professor of organic chemistry, will continue an investigation of hydrogen bonding and conformational analysis.

The new chairman of the graduate department of French at the University of Toronto is **Victor E. Graham**. Professor Graham taught French and was assistant to the director at the University of Alberta in Calgary until 1958 when he accepted the Toronto appointment.

'49

Bernard L. Nugent has been elected vice-president of National Tank Limited.

The Northern Alberta Institute of Technology has as its new director **J. O. Starritt**. Mr. Starritt joined the staff of N.A.I.T. in 1963 as registrar.

On the occasion of the official installation of Her Excellency Madame Vanier as Chancellor of the University of Ottawa in February, the University of Alberta representative was **The Hon. Marcel Lambert, M.P.**

J. Scarborough has been appointed property superintendent of C. M. & S., Trail.

The new director of St. Louis University Hospitals is **Dr. Ernest N. Boettcher**. Dr. Boettcher is resident at 19 Brighton Road, West Hartford, Connecticut.

'51

G. W. Bennett has been named controller of Home Oil Company Limited.

Commencing in September, **W. J. Cousins**, Dean of the Lethbridge Junior



A FLIGHT TO LONDON

Graduates . . . would you be interested in joining other U. of A. Alumni on a charter flight to London next summer?

The tentative dates are July 15th to August 15th, 1967. Air fare from Edmonton to London and return would be approximately \$330 per person.

If this month long sojourn abroad appeals to you, perhaps you would indicate your interest by ticking the box below and returning the slip to the Alumni Office on the Edmonton campus.

☐ I would be interested in a charter flight to London next summer.

Name

Address

College will step down and become a full professor in the department of history. Mr. Cousins is the first man to receive a full professorship at the institution. In his new capacity, Professor Cousins will devote full time to the history department.

Funeral services were held recently for Miss Frieda Staal, an assistant principal and school teacher in Calgary for thirty years.

'54

Dr. H. J. Crooks has been installed as a fellow of The American College of Obstetricians and Gynecologists in Chicago.

'55

Donald M. Borchert, has been appointed assistant professor of religion at the Juniata College in Huntingdon, Pennsylvania.

'56

One of two Boston doctors performing delicate eye operations in upside-down surgery is **Dr. H. MacKenzie Freeman** at the Retina Foundation in Boston.

'59

Nester A. Fedoruk has completed a Ph.D. degree at the University of Oregon and recently accepted a position as research chemist with DuPont.

'61

Two new administrators, both with extensive experience in education, have joined the staff of the Separate School board in Edmonton. They are **Dr. Joseph Quinn** and **John Nearing**.

Dr. Richard Graham Miller, son of the late Dr. R. B. Miller, has been awarded a post-doctoral fellowship at the California Institute of Technology. Later in the summer he will take up a position as research fellow at the University of Toronto and conduct research work in the field of biophysics.

W. J. Robertson has been appointed assistant superintendent of C. M. & S., Trail, B.C.

The Henry Marshall Tory Memorial Scholarship provided by the General Alumni Association has been awarded this year to **Edward D. Boldt**.

'62

David Beckwith has been ordained as a United Church minister.

Dr. Armin A. A. Mohr has been appointed a resident in internal medicine at the Mayo Graduate School of Medicine.

'63

Dr. Vernon G. MacKay is now associate professor of animal science at the University of Guelph.

'65

Miss **Martha Munz** at St. Mary's Secondary School in Zambia recently represented The University of Alberta at the installation of Dr. Kenneth Kaunda as Chancellor of the University of Zambia.



Professor Henry George Glyde, Head of the Fine Arts Department at the University, a man who has made a tremendous contribution in the field of art and art education in the province, is to be awarded The University of Alberta National Award in Art for 1966.

The Award is presented annually to persons who have made outstanding contributions in the fields of music, letters, or painting and related arts. Past recipients of the Award include Sir Ernest MacMillan, A. Y. Jackson, the Rt. Hon. Vincent Massey, Mazo de la Roche, Lorne Pierce, Hugh MacLennan, Lois Marshall, W. G. Hardy, G. F. Comfort, Marius Barbeau, Will R. Bird, and others.

The Award will be presented to Professor Glyde during the summer at the Banff School of Fine Arts. From 1936-46, Professor Glyde was a staff member with the Institute of Technology and Art in Calgary and in 1946 he joined the staff of The University of Alberta in Edmonton. Appointed full professor in 1949, the same year he was made a member of the R.C.A. Mr. Glyde was named curator of the University Art Gallery and Museum in 1950. Since 1955, Professor Glyde has been Head of the Department of Fine Arts. In 1958, he was awarded a Senior Overseas Fellowship by the Canada Council.

DISTINGUISHED ALUMNA NAMED JUDGE

Alberta's first woman judge is Mrs. Marjorie M. Bowker, '38.

Mrs. Bowker is the wife of Wilbur F. Bowker, Dean of the Faculty of Law at the University. Her appointment as a judge of the Juvenile and Family Courts in Edmonton was made by order-in-council recently.

Two other women have been appointed magistrates in Alberta. The first was Emily Murphy, appointed in 1916 to become the British Commonwealth's first women magistrate. The other is Magistrate Wallace Kempo who presides over a traffic court in Edmonton.

Mrs. Bowker was born in Prince Edward Island and moved to Westaskiwin at an early age where she received her schooling. She graduated from The University of Alberta with an arts and law degree and was admitted to the bar in 1940.

During many years of public service, Mrs. Bowker has been a member of the Patterson committee on adoptions and chairman of the committee on juvenile corrections. She has also made intensive studies of juvenile delinquency.

ALUMNUS PRACTISES UPSIDE-DOWN SURGERY

One of two Boston doctors performing delicate eye operations through the medium of upside-down surgery is Dr. H. MacKenzie Freeman, '56, at the Retina Foundation in Boston.

It's a topsy-turvy way to perform any operation, but this heels-overhead technique is now being used for some of the most delicate eye surgery doctors know how to do. As a result of a blow, a half-square inch piece of retina—the fragile, tissue paperlike lining of the back of the eye—becomes detached and is folded over on itself.

A special table was developed by Dr. Freeman and his assistant at the Retina Foundation whereby they can swivel a patient upside-down and around until gravity unfolds the retina back in place. Then they reattach it surgically.

